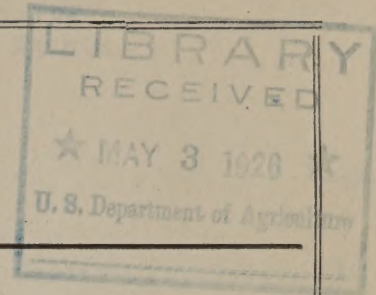


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## CHILD FEEDING



Excerpts from 1925 Annual Reports of  
State and County Extension Agents

Prepared by  
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Washington, D. C.

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Cooperative Extension Work in Agriculture and Home Economics  
United States Department of Agriculture and  
State Agricultural Colleges Cooperating

Brief No. 33

March, 1926

# CHILD READING

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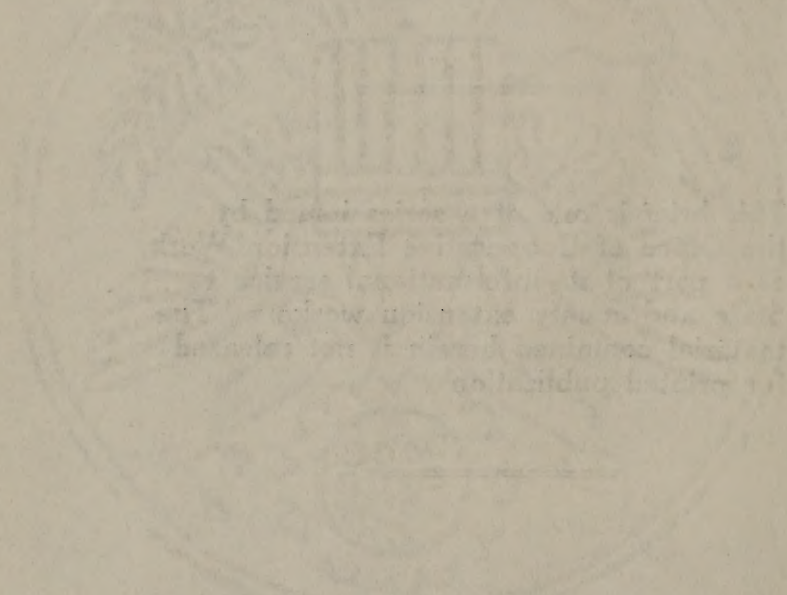
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CHILD FEEDING\*

Excerpts from 1924 Annual Reports  
of State and County Extension Agents

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Introduction

As its name implies, this brief deals with extension work organized around one or more aspects of child feeding. Therefore, it touches on the large volume of nutrition work organized around the feeding of the family as a whole, only as this initiates or supplements some outstanding activity connected specifically with child nutrition. It should be understood that

\*No attempt is made to cite all references to child feeding in this circular. Only selected extracts showing typical methods employed and results obtained in a number of States are included. Owing to differences in terminology used in various States and to other local conditions, the information contained herein should be reviewed by the State subject-matter specialist concerned before incorporating any part of it in the extension program for the State.



# Inventory of the Library of the U.S. Army Medical Department

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attention is being given to the problems of proper food for children as a part of a number of other subprojects in foods and nutrition.

The excerpts that follow may be grouped roughly under the headings of health education and nutrition teaching in the schools; the establishment of hot school lunches and the work of school-lunch clubs; growth work (health work) with members of boys' and girls' clubs as a part of their regular club work; and work with the mothers of preschool children.

The reader can not fail to be impressed with the splendid examples of cooperation in child health programs between the local extension organization and the extension agent, the schools, and local or county medical and health officers. Not infrequently it is the extension agent who sees the need of leading out in such a program, sometimes as a logical outgrowth of an existing nutrition program with adults or with club members, and sometimes because it proves the best way of interesting the adults in nutrition for the family. The experiences quoted bear witness that the most far-reaching and lasting results are obtained when the health education program procures the intelligent and organized support of the adults, through the assistance of trained local leaders, group meetings of parents and other home makers, and the enrollment of local demonstrators in child feeding.

This brief contains a gratifyingly large number of descriptions of organized health or growth work with members of boys' and girls' clubs, covering the improvement of food and health habits through the use of appropriate score cards; county and State health contests, and work at club camps and short courses. Growth work is proving so effective in interesting members and parents alike in better standards of health and can be correlated so closely with the subject matter of agricultural as well as home-economics clubs, that we may confidently look forward to its spread and development during the next few years. Doubtless the single health examination that now serves as a climax of the health contest will be supplemented by a similar examination at the beginning of the club year, so that recognition can be given for improvement in general condition made during the course of the project as well as for physical perfection. States will soon recognize the value of demonstrating the points of good growth and good nutrition, using the winners of county and State health contests as demonstration material, and more States will emphasize the varied aspects of growth work at club short courses and camps. Team demonstrations will also be developed, showing the correlation of growth work with the subject matter of the various clubs.

Only one excerpt in this brief deals with nutrition work for preschool children. It is believed that the small amount of work being done in this field is not due to lack of appreciation of the vital importance of the early years in the development of the child. Recent studies on rickets and on the development of teeth show plainly that the prenatal conditions and the food and hygiene of the infant and preschool child practically determine that the quality of bones and teeth profoundly influence the structure and shape of the body and increase or decrease its resistance to disease. In view of these facts, we must find ways to overcome the undeniably great difficulties in reaching the overbusy mothers of young children in the important matter of food selection. Perhaps the answer will be found in a combination of periodic



clinics, help in cooperation with other State or local agencies, the enrollment of interested parents, a limited number of community meetings, and the use of the radio to supplement the other means of instruction.

### Arizona

In connection with the health projects, nutrition work has been carried on through the schools. Early in the year this work was begun in five communities in Apache County. The schools were visited and the children were weighed and measured each month for four months. Nutrition talks were given to all pupils and special instruction was given to those who were 7 per cent or more underweight.

In 3 communities meetings were held with the mothers, and as far as time would permit, personal interviews were given those whose children needed special attention; in one community the homes were so far apart that meetings were impractical; and in Concho, the all-Mexican community, few mothers were reached as it takes much time to gain the confidence of the people who do not speak English. In these 5 communities contacts were made with 443 children, 147, or 33 per cent of whom were more than 7 per cent underweight.

In spite of the fact that all pupils did not enter the contest at the beginning and all did not remain in school until they were weighed the fourth time, caused by the people moving in and out of the communities, 54 of the 147 underweights showed good gains and some who were very much underweight made notable gains. One 13-year-old girl who was 12 pounds underweight gained  $8\frac{3}{4}$  pounds and made a corresponding improvement in health.

In this work much interest has been manifested by pupils, teachers, and parents, but because of the widely scattered homes and communities in large districts it has been impossible to get as definite results as is desired. The most careful estimate possible, under the circumstances, indicates that at least 57 families have adopted improved practices in child feeding and approximately 170 children have been helped thereby.

In three other schools hot lunches served in winter and cold milk and fruit juices served in hot weather helped the physical condition of the children. The extreme heat in some districts, the scarcity of good gardens, and the long distances to schools, perhaps account in part for the children not making better gains. However, 17 of the underweight pupils have each gained 2 pounds or more between the first and fourth of the monthly weighings, and there has come to the agent reports of decided improvement in deportment and scholarship on the part of those pupils who made notable gains in weight and health. One girl 67 inches in height began straightening her stooped shoulders and during the three months' time raised her weight from 111 pounds to 119 pounds.

Further results show that in one community, including three Mexican families, all are using some whole wheat or graham flour, and the children's school lunches are much improved, through milk taking the place of coffee, fruit taking the place of pie, and wheat muffins and sandwiches made from wheat flour taking the place of the cold baking-powder biscuits and tortillas which formerly were a part of the midday lunch.

A conservative estimate of the number of families in these 10 communities adopting improved practices relative to nutrition would show 60 homes, involving 190 children.- Rosa Bouton, Home Demonstration Agent, Flagstaff, Apache County.



Arkansas

This year a health contest for club girls was conducted in the State. Four hundred and twenty-three girls entered the contest. Each contestant was required to keep a health score card and a food-habits score card. Several girls who were underweight built themselves up to a high standard. The winner in the State contest was one of the former underweights. This is a splendid demonstration, showing through these girls who improved, that health rests in their own will power to form good health habits. G. E. Conant, Nutrition Specialist, 310 Donaghey Building, Little Rock.

When the health contest was announced from the State office, the county health worker and I discussed the matter and agreed upon the following plan:

After I had presented the work in the community and given instructions in posture, foods, and general health habits, the health worker did the weighing, measuring, and examining. At a meeting in each junior club I introduced the contest, gave general instructions, handed out the score cards, and at this same meeting I held a demonstration in egg and milk cookery.

In March, a small, hollow-eyed, thin, and wan-looking girl came to the office and asked that I come to Farmville to organize a club. A date was set, and the county agent and I went out to Farmville. We found a school of about 70 children, and upon looking them over I thought surely 90 per cent of them were underweight. I learned later, when the county nurse and I spent a day in the community, that the condition was even worse two years ago when not one child of normal weight was found in a school of 77 pupils.

The first work conducted in this club was health, and the egg and milk cookery was given. I think more progress along this line was made in this club than in any other club.

In meeting with the club each month, I tried to touch upon this subject for a few minutes, giving corrective exercises for stooped shoulders, bad posture, flat feet, and other common bad habits and defects of youth.

In June, with the able assistance of the health worker, we held the community contest. The girl scoring nearest perfect in each community was chosen, provided she had kept a satisfactory food-habits score card.

In July, the county contest was held, and one of the physicians of Warren examined the girls. He selected the best specimen, and she represented the county at the district contest where she won. She then went to Memphis to compete in the tri-State contest and there won over the contestants from Mississippi and Tennessee. The girl is now on her way to Chicago to attend the third club congress, the trip being awarded by the tri-State fair.

The health contest gave me a basis on which to compute the nutritional condition of the homes of the 12 communities in which I worked. I decided we needed some other methods of improving upon our food, so I studied the school lunch. I found them poor compared with lunches I had seen in other rural sections of the State, so I launched a hot-lunch campaign. Three of the women's clubs voted to conduct hot school lunches and one club raised money and built an annex in which to prepare and serve the lunch. They built in a cabinet and purchased a stove and utensils for cooking. - Ida M. Fenton, Home Demonstration Agent, Warren, Bradley County.



## California

On March 17, 1924, it was proposed by Miss Mary Davis of the bureau of child hygiene that the county nurse and the home demonstration agents cooperate on some plan of working with preschool children who will enter school in September, 1924, since one-third of the children entering school for the first time are reported not physically fit.

The goals for 1924 were as follows:

- (1) To weigh and measure preschool children in six farm-home departments.
- (2) To have nurse in one of the three zones give physical examinations to the children of two centers.

The following methods to be used:

- (1) To have list of children made by project leaders.
- (2) To have children weighed and measured at regular farm-home department meetings by county nurse and home demonstration agent, mothers to be present.
- (3) To have mothers of underweight children enroll as home demonstrators and attend all nutrition meetings.
- (4) Home visits as necessary, or desirable.
- (5) Reports of project leaders and home demonstrators.

In April 1924, the project was explained to and adopted by the county committee at the county chairmen's meeting. Following this the nutrition project leaders with the help of the teachers of 6 centers procured a list of the September entrants. In May the children and mothers came to the meetings. Twenty-seven children were weighed and measured, 19 of whom were underweight, 14 seriously so. In the 2 centers where we had the services of a nurse we found 3 children with physical defects. The mothers of the children agreed to attend all nutrition meetings; but owing to the long deferred vacation period of our county, most of them failed to do so. In September, we had planned to take scales to the schools and weigh and measure the same children again. This was not done, however, as the agent has not had time since she was granted permission to use the scales which were borrowed. The agent has worked 6 days on this project.-- Orpha A. Miller, Home Demonstration Agent, El Centro, Imperial County.

Although a separate project involving child-feeding work in addition to the nutrition project was carried on in one center in this county, child feeding has been emphasized in all 13 farm-home departments active in nutrition work. In all discussions pertaining to food selection, the welfare of the child has been given first consideration. Foods for good bone and teeth growth; the use of vegetables in the diet; ways of using milk other than a beverage; the value of eggs, especially for the growing child; and the value and necessity of concentrated foods for the growing child have been given much consideration. The amount of foods needed by children of various ages and the value of well-balanced meals, the right use of sweet foods, the importance of the hot dish at noon for the school child, and the advisability of regular meals, have all been discussed in farm-home departments.



During the latter part of 1923 and the first of 1924, six farm-home departments were active in assisting with hot school lunches in their districts. Three other farm-home departments discussed the possibility of establishing hot school lunches in the fall of 1924. In each of these farm-home departments committees were appointed to cooperate with the teachers, the boards of trustees in their districts, and the home demonstration agent in the betterment or establishment of school lunches.

The county home demonstration agent has prepared sets of recipes in 50 serving quantities to be used in rural schools, and suggestions of weekly menus for the schools serving one hot dish daily. The county nurse and home demonstration agent have met several times and discussed plans for cooperating in health work. The county health officer and the county nurse attended one county committee meeting and offered to assist and cooperate with the home departments throughout the county. A committee from the county farm-home department committee met with the county school superintendent and offered to cooperate with the nurse in health work.- Margaret Todt, Home Demonstration Agent, Modesto, Stanislaus County.

### Colorado

So many of the boy and girl club members became interested in health work that some of the counties held contests at county fairs. In Larimer County the members who had kept the food-habits score card and had been measured and weighed were given ribbons to show they were health demonstrators. The champion was sent to the State fair.

More than 500 boys, girls, and leaders, representing 48 counties, were in camp at the State fair. Each county was entitled to enter one boy and one girl in the contest. The examinations, which include both physical and mental tests, were in charge of the child welfare bureau and Miss Mary Callopy, of Ft. Collins, was manager of the contest.

Although nearly all club members were interested in the examination, the interest of the boys excelled that of the girls. The boys asked such questions as, "Why did they not score perfectly on certain points, and how could they remedy their defects?" The following results of the examination are of interest:

The highest score among the boys was made by Bob Taylor, who scored 143 in the mental test and 99.6 in the physical test. The next three scored as follows:

<u>Mental</u>	<u>Physical</u>
132	99
127	98
125	97

The lowest of the first 10 scored 115 mental and 93.2 physical, which is a very good scoring.

Although individual girls did not rank as high in the mental test as some of the boys, the average for the first 10 girls was higher than the average for the first 10 boys. The physical test showed the girls excelling, as follows:



<u>Mental</u>	<u>Physical</u>
129	100
123	100
121	98.5
116	97

The contest and results aroused the interest of those in camp, and they looked forward to the announcement of the health championship with as much enthusiasm as for any other project. - E. F. Smith, Nutrition Specialist, State Agricultural College of Colorado, Fort Collins.

Observing the condition of the school children of Conejos County in regard to general health and habits, it was decided to conduct a health campaign with the idea of improving the health of the children by better food and health habits, and in some cases medical attention. Local physicians cooperated heartily and the Mormon church sent a nurse who assisted greatly in making the preliminary survey and advising the mothers in many matters. The State nutrition specialist spent 4 days in the county and met with the leaders from 7 communities and went over the data collected by them and the nurse. From this a plan of action was formulated and the work actively started in 4 communities, with 3 other communities trying to obtain cooperation sufficient to carry on the work. One community which had the project going well is getting behind on account of lack of real leadership in this work.

Three communities have taken up the work through the schools and are keeping up to date, height-weight charts which they made for over 500 school children. Five groups of women, with a total of 120 members, have been organized and are meeting once or twice each month to study and discuss this project. It has been estimated that 150 homes have been influenced by this work and 600 children, who are known to have improved their diet and habits, have been reached. It is impossible to get definitely the total number of persons reached, as many are improving their food habits and their health without taking active part in the work.

In three communities the children bring milk to school and drink it at recess, and others are beginning to follow their lead. Great improvement is being noticed in the children, both physically and mentally. The use of fruits and vegetables and a reduction in the use of sweets is noticed, as the children are taking much interest in trying to bring themselves up in these respects to as near perfection as possible. Better school lunches are being prepared by at least 100 mothers and one community will have hot lunches in its school. Hearty cooperation has been obtained by all agencies in the field. In a short time we will have actual data from this community which we can take to other communities to show them where they can benefit by this work. - Bert Minor, County Agent, Romeo, Conejos County.

### Connecticut

Health club work has been conducted in Fairfield and Tolland Counties. In the latter county 12 clubs, with an enrollment of 235, carried on with marked success. One of these clubs carried through the entire year and completed their work practically 100 per cent. Eight clubs were organized a little later in the year and while they did not cover all the work outlined



they will continue until they have completed. Within the past 2 months 12 new clubs have been enrolled in Tolland County, making a total of 24 clubs which will be carried the coming year.

These health clubs were started with the idea of enrolling only underweight children and of organizing the clubs around the community instead of around the school as a center. Because of the difficulty in getting the scales for weighing and because of the interest shown by teachers, school nurses, and superintendents of schools, practically all the health clubs have been organized in connection with the schools. In nearly every case this meant that persons in the school joined the club because they needed instruction on food and health habits nearly as much as the underweight children.

The goal this year was approximation to normal weight. Next year the clubs will be continued on the same general plan, but the goal will be the formation of better food and health habits, emphasizing the use of more milk and the increased use of vegetables where needed. Special report forms will be made up so as to enable us to check on these particular things. The health habits we shall especially work for this year will be longer hours of sleep for underweights and better posture for all. - A. J. Brundage, State Club Leader, Connecticut Agricultural College, Storrs.

Many mothers of large families can not attend group meetings, and if some did come it would be impossible to interest them in nutrition. Two years ago only three women were present at a health meeting held in a rural community. At that time it became clear to the agent that if health work was to be done for many of these families it would have to be through the children. Since that time the agent has worked on that basis. The past year 20 health clubs have been added to the four already in the county and much of the agent's time has been spent organizing the clubs and developing the work. At the present time we have 24 clubs with a membership of 550 children. These clubs represent 175 rural families, most of whom are being reached in no other way by the extension service. Better health and food habits are being taught. The children keep records of their habits and in many cases they carry their record books home to their parents and in this way interest them.

In the case of parents who are already trying to get their children to form good habits, the health clubs are of much assistance. A mother of four children of school age reports these clubs have been a great help to her in getting the children to drink milk and eat more green vegetables. Many of the underweight children have been brought up to normal. One little girl, who all her life had been underweight and not very strong, was the only member of the club who did not come up to normal during the period of the club. But from 14 pounds underweight, in the course of time this child reached normal and is now 3 or 4 pounds above normal. From an anemic, thin, little girl she has become a rosy-cheeked, healthy-looking child.

As a result of club work many of the children have given up tea and coffee drinking and are drinking milk and eating more green vegetables. Four school lunches have been established this year. Some of the children planted health gardens last spring and a little Italian girl won first prize with her spinach which she exhibited at the local fair.

The goal of 1 quart of milk a day and 2 green vegetables besides potatoes will continue to be emphasized in the club this year and, in addition, better posture will be worked for. - S. W. Dimock, Home Demonstration Agent, Rockville, Tolland County.



## Georgia

This year the agents have conducted 66 classes for underweight children with 2,238 enrolled. These classes are used to teach health to a school, a community, or a county, as well as to improve the health of the children enrolled. They have been found to be very effective.

The project, which is always carried on in cooperation with a physician, offers an opportunity to do a well-rounded piece of work by taking care of physical defects, health habits, and food selection. As a result of this work many physical defects are taken care of that otherwise would not be corrected.

Realizing the importance of reaching not only the underweights but all children in regard to nutrition, a program has been worked out for them. This program consists in weighing and measuring the children, using the classroom weight record, and keeping the nutrition score card. The demand for score cards which are used by the teachers, home-economics teachers, nurses, and county agents, has been great and some very effective results have been obtained. The following report was made by a home-economics teacher who carried out this program for nine weeks:

Number of pupils.....	129
Number of pounds gained.....	132 $\frac{1}{2}$
Number of pupils underweight at start.....	81
Number who reached normal weight.....	18
Largest gain in pounds made by one pupil..	11
Number who drink milk.....	99
Number who did not drink milk before nutrition project started.....	34
Number to stop drinking coffee.....	41
Number to stop drinking tea.....	45

The club girls are required to keep the nutrition score card for at least 12 weeks during the year as a part of their program of work. They are encouraged to keep records of their weight, the underweights being given special attention. Underweights are instructed to have a physical examination so that any physical defects interfering with their health may be corrected.

County extension agents continue the work of improving the school lunches of rural children through the selection of more nutritive foods and through serving a hot dish with the cold lunch brought from home. This year 343 schools did some work along this line.- Susan Mathews, Nutrition Specialist, Georgia State College of Agriculture, University of Georgia, Athens.

## Illinois

Much interest has been manifested by mothers and children in the school of nutrition which is being conducted by Miss Bussey, Red Cross nurse for Champaign County, and Mrs. Blanche Moore, the home demonstration agent. Five schools and two rooms at Savoy have been selected by them for this work. The school was started several months ago and each month the children have been weighed and records have been kept. These records show that practically every child has made a steady gain.



The children have been given several rules governing what they may do and may not do, as follows: They should drink milk, get the proper amount of sleep, eat fruits daily, exercise in the open air, eat vegetables other than potatoes, eat meat once a day, and they should not eat pie or sweets between meals.

During the year, health programs were given by the five rural schools which took part in the health project. These programs consisted of health pageants, health songs, recitations, and drills.

In connection with the nutrition work the children have been weighed and measured twice a month and records have been kept. The children who were underweight have been examined by a physician and the causes of malnutrition corrected as far as possible. A complete chart of each child's weight and gain is kept by the county adviser, the school nurse, and the teacher.

In connection with the project a Health-Gazette, a small newspaper for the children, has been issued. This paper emphasizes many of the facts stressed during the school visits and publishes a number of letters which have been written by the children themselves, telling of the benefit to be derived from the project. Each owner of a record card has taken a personal interest in watching the tabulations to see whether he has gained any since the last record was made. The children who have been normal in weight have also been interested in keeping their good record at standard. Pupils have written letters and health essays and have drawn posters as a part of their school work. - Blanche S. Moore, Home Demonstration Agent, Champaign, Champaign County.

## Iowa

The third annual health contest was conducted at the State fair this year. In 1922, when the first contest was held, the girls had to be coaxed to enter, but this year 52 girls were examined. In 1922, 46 counties were represented; in 1923, 49 counties; and in 1924, 52 counties, which shows health growth in the right direction.

This year 9 counties held county-wide health contests as a result of last year's contest at the State fair. At the State fair Doris Poorbaugh, of Story County, scored 96.6; at the interstate fair her score was 97.1, and at Chicago it was 98. This increase in her score proves that follow-up work has been done. At the interstate fair, with 11 States competing, Doris placed fourth, and at Chicago, with 33 States competing, she again placed fourth. At our State fair the doctor in charge of the contest gave the awards and told why Doris Poorbaugh was given first place. This talk, which was a new feature of the contest, was an inspiration to the girls. - Josephine Arnquist, Girls' State Club Leader, Iowa State College of Agriculture, Ames.

The first health contest for club girls was held this year in Benton County. Each club could choose three girls who came nearest to perfection according to Dr. Wood's height and weight chart, and who were to represent their club at the county health club contest.

One doctor who was chosen chairman took up the plans with the county medical association and scheduled the time, place, and so forth, for the



contest. Ten doctors and four dentists each gave a half day to this project, gratis. The physical examination was held at the Virginia Gay Hospital on August 6 and 13.

Thirty girls were given physical examinations, using the same score card which was used at the State health contest. Vera Farris of Cedar township, scored highest with 99.4 per cent. It was appalling to find that 43 per cent of the girls had goiters and many other defects which could be corrected. The parents think that this contest was worth while and were glad for their girls to have the opportunity to compete. We are trying to have every girl check up on her birthday. We have made the first move in this project and the people are taking kindly to it. - Cecile Manikowske, Home Demonstration Agent, Vinton, Benton County.

### Kansas

Last winter an interesting experiment was conducted in 3 Kansas counties. In each county 2 schools were chosen, 1 in which a hot-lunch club was formed and 1 where it was impossible to form such a club. Statistics on the health, grade of school work, weight and measure of each child were carefully kept, and it was found that the children in the hot-lunch clubs were gaining at least 30 per cent more than those not in hot-lunch clubs. The teachers also reported an added interest in school work and better grades in a number of cases, after the hot lunch and health clubs were formed.

The following is from the Clay County home demonstration agent's annual report:

"The health club organized at Wakefield is still progressing. The membership has been extended to grade pupils. The children of the various grades are weighed and measured once a week at which time the leader talks on food and health habits.

"Gladys Van DerStedt, a member of the health club, won first place at the health contest at the club round-up at Manhattan, where she scored 99.2 per cent. Gladys will be awarded a trip to the International Livestock Show at Chicago, where she will represent Kansas in the health contest."- W. P. Martin, Health Specialist, Kansas State Agricultural College, Manhattan.

One health club with 12 members has been organized in Reno county. The following course was outlined and carried out by the Sylvia health club:

1. Object:
  - (a) To keep myself in perfect health as nearly as possible and to keep growing as I should.
2. What I need to know to do this:
  - (a) What the signs of good health are.
  - (b) What foods I must eat to keep myself healthy and growing.
  - (c) What I shall eat for breakfast, dinner, and supper.
  - (d) What other things I need to do that will help to keep me healthy and growing.
  - (e) What injurious habits I must avoid.



3. What the signs of good health are:
  - (a) Muscles that are firm, well-developed, with a moderate amount of fat.
  - (b) Posture and carriage correct (head and chest up, shoulders back, and abdomen in).
  - (c) Skin that is soft and smooth and has a healthy glow. No dark circles under the eyes.
  - (d) Lips and mucous membranes a reddish pink.
  - (e) Eyes that are bright and clear.
  - (f) Facial expression happy, individual, good-natured, and full of life.
  - (g) No physical defects as shown by medical examination.
  - (h) Good-health habits as to food, sleep, and so forth.

Program I.

1. Topic- Health habits.
  - (a) Discussion.
    - (1) Memorize health rules.
    - (2) Discuss ways of changing wrong, or establishing correct habits.
  - (b) Practice.
    - (1) Measure height.
    - (2) Demonstrate correct method of brushing teeth.
    - (3) Plan a health poster.
  - (c) Home work.
    - (1) Weight.
    - (2) Apply health rules.
    - (3) Make a health poster.
2. Songs and games.

Program II.

1. Selection of foods for health.
  - (a) Discussion.
    - (1) Right weight for age height.
    - (2) Classes of foods needed by the body.
    - (3) Make a chart of height and weight of girls.
    - (4) Drill on the principal types of foods needed, giving reasons.
  - (b) Home work.
    - (1) Live by health rules.
2. Songs and games.

Program III.

1. Topic- Planning the meal for the day.
  - (a) Discussion.
    - (1) Types of meals needed by persons of different ages and engaged in different occupations.



- (2) Balanced meals.
- (b) Make menus for one day as a sample of meals which may be worked out for the family.
- (c) Home work.
  - (1) Check meals on food score card.
- (d) Recreation - games, songs, or exercise.

Program IV.

- 1. Topic- Milk and milk dishes.
  - (a) Discussion.
    - (1) The value of milk in the diet.
    - (2) The use of milk in soups, custards, and escalloped dishes, as a beverage and for the school lunch.
  - (b) Home work.
    - (1) Prepare three milk dishes.
  - (c) Songs, games, or exercise.

Program V.

- 1. Questions on milk.

Program VI.

- 1. Topic- Vegetables.
  - (a) Discussion.
    - (1) Value of vegetables in the diet.
  - (b) Home work.
    - (1) Prepare three vegetables.
  - (c) Songs, games, and so forth.

Program VII.

- 1. Topic- Fruit
  - (a) Discussion.
    - (1) Reasons for using fruit in the diet.
    - (2) Suitable fruits for breakfast.
  - (b) Home work.
    - (1) Prepare fruits for breakfast.
  - (c) Songs and games. Review questions on fruit.

In addition to carrying out this program of work the girls went on hikes, rode horseback, held a picnic and a two-day camp. It is hoped that this work may be developed more fully next year and more definite results may be obtained. The club has been organized only six months which gives little chance for definite results to be obtained. - Edith A. Holmberg, Home Demonstration Agent, Hutchison, Reno County.

Kentucky

All the nutrition work I have done has been through the schools, working with the 5th, 6th, 7th, and 8th grades. I worked with 3 schools until they finished the work I had planned for them, and now I am starting work with 3 more schools. It was frightening to see some of the undernourished children from



the little mining towns. In a number of homes visited in the follow-up work I discovered that the mothers were dead and girls from 12 to 18 years old were keeping house and going to school. In these homes, as well as the average home where there was a mother, the noon and evening meal consisted of water-corn bread and fat hog meat boiled with some kind of dried beans. For breakfast they had biscuits, fried meat, and sorghum molasses.

There were two main difficulties in bringing about a change in this diet, namely: (1) The people liked this food, never having known any other; and (2) they had no money to buy anything else. The children at once became interested in their weights and in receiving the gold and silver stars for gaining, and they in turn brought the mothers to the classes. The first thing I did was to establish friendly relations with these mothers, and then by skillful maneuvering was able to get invitations to homes. Gradually I worked my way into most of the homes, those kept by girls, and those kept by mothers, and as a result, 110 homes are known to have changed their meal preparation and service.

In conducting these nutrition classes the children were weighed and measured each month. At first the underweights gained very little, but later they gained rapidly. The children made nutrition posters and during my weekly visits to the schools I gave them nutrition lessons. During these visits the children did most of the talking and both children and visitors asked many questions. - Zilpha Foster, Home Demonstration Agent, Greenville, Muhlenburg County.

#### Maryland

Last September, nutrition work was started in the schools and was carried through the entire year. In many places where the children were underweight the agent found it necessary to enlist the boys' and girls' services in helping to improve their general health and living conditions. A score card was made each month upon which the children's names were entered. Club members served as record keepers, and it was the duty of the president or leader of the club to see that these records were accurately kept and recorded in the proper places. Instructions on the signs of malnutrition, reasons for malnutrition, and care of malnutrition were given, and literature on these subjects was distributed.

Corrective habits, the number of meals, and the food requirements for growing children were discussed at the regular monthly business meetings, and demonstrations on the preparation of the proper foods for growing children were conducted. In 4 schools hot lunches were served daily whereas in 5 other schools they were served once or twice a week. The lunches were prepared by the club girls and consisted of vegetables, cocoa, soups, creamed and baked potatoes, scrambled eggs, creamed salmon, and the like. The vegetables used were canned by the club girls during the canning season, and the other materials were purchased from funds derived from club dues which amounted to about 2 cents a week. The children who were not financially able to contribute to the lunch were served free of charge. - Olive K. Walls, Home Demonstration Agent, Easton, Talbot County.



# Massachusetts

The school nutrition project was carried on in Provincetown where 19 teachers from 6 schools and representing grades 1 to 6, came to a teachers' training group which was conducted by the home demonstration agent. A series of 7 training meetings, extending from October to June, were held with this group. Considerable subject matter was introduced as well as methods of presenting the work to the children.

The school nurse cooperated in this work. All children were weighed in the spring and fall, and all who were 10 per cent or more underweight were weighed each month. Individual weight charts were kept of the underweights and these proved an incentive for the children to watch their food habits. Each underweight's monthly weight was sent home to his parents.

As shown in the report below, count was taken each month on various food habits of the children. This was done to give them, from the start, a general idea of good food selection along with specific lessons on the use of milk, vegetables, fruit, and so forth, which was taken up each month. The results are as follows:

	Nov.	Dec.	Jan.	Feb.	Mar.	May
Number of children in project.....	330	520	307	565	567	555
Number who drink 2 cups of milk daily.....	153	299	211	376	382	349
Number who do not drink tea or coffee.....	207	366	245	389	406	403
Number who eat fruit daily.....	286	440	255	460	448	403
Number who eat 2 vegetables daily.....	209	325	214	380	376	362
Number who eat cereal each morning.....	188	360	213	300	290	311
Number who eat good breakfast.....	225	438	269	463	447	413
Number 10 per cent or more underweight.....	44	71	25	73	42	18

In the above report it is noticeable that the number of children having certain food habits was in some cases larger during the winter than at the completion of the project. Some of the teachers explain this by saying that they believe the children perhaps held up their hands to be counted because they thought it was the thing to do. They say this occurred in the winter, whereas toward spring or after the report had been taken several times the youngsters were more conscientious about it.

In the main the teachers promoted this work by handling it in correlation with such subjects as reading, music, and hygiene. Many posters were made by the children to supplement those furnished by the extension service. Songs and stories were used to emphasize points in this project.

It is interesting to note that the town in which this work was given is composed largely of Portuguese and their principal food seems to be fish and potatoes. As Provincetown is not in an agricultural section, the milk and vegetable problem was a large one. Commercial canned vegetables, and evaporated and dried milk had to be recommended largely to replace the fresh products, as the few that are obtainable are rather high in price. Pasteurized milk for the midmorning school lunches was shipped in from Boston, a distance of 140 miles. Half-pint bottles of milk with 2 crackers were given out each day, each child paying 5 cents a day in advance. The teachers reported that by the close of school 400 children were either bringing milk to school or



buying it there. Several mothers reported that children who formerly refused to drink milk at home now insist on having it. - Thelma Baall, Home Demonstration Agent, Hyannis, Barnstable County.

### Minnesota

The health project for 1924 is as follows:

#### I. Form of project organization:

##### a. Enrollment.

Boys and girls who were members of other clubs enrolled in the health project. A separate club was not organized for health club members. The ultimate goal is for every club member to be enrolled in the health project. This year the enrollment increased to 270 members from 8 counties. Many others were interested as is shown by the fact that approximately 250 boys and girls were examined at the State fair when the physical examinations were given by Twin City physicians cooperating with the State board of health.

##### b. Requirements:

(1) Any boy or girl enrolled for one of the regular club projects may also carry the "Let's Grow" project.

(2) Each member enrolling should aim to make his or her own body grow normally by eating the proper food and to obtain perfect health by observing simple health rules.

(3) Each member was asked to keep a record of weight, gain, meals, sleep, and rest for a period of two weeks, and to write a story, entitled, "How I Learned to be Healthy."

##### c. Development.

The health project has grown this year which is probably due to the interest developed through health contests. The nutrition specialist helped to develop the demonstration by writing a series of circular letters to all members enrolled.

#### II. Leadership:

Leadership was provided largely through the county extension agents. Two county club agents and 1 home demonstration agent conducted successful health clubs. In 1 county the women were having a nutrition project, and they were instrumental in interesting a large number of boys and girls. In 1 county a local woman led a very successful health club and trained a team to demonstrate the selection of food for balanced menus and to demonstrate exercises for proper growth.

#### III. Subject matter:

Subject matter was provided through an outline of the project made by the club department, a series of letters to the members written by the nutrition specialist, and material on nutrition and hygiene provided by the local leaders. The letters written by the nutrition specialist covered material on posture, milk, fruits and vegetables, and proper exercise and rest.



#### IV. Results and achievements:

Each boy and girl who won a trip to the State fair was given an opportunity to have a physical examination which included such phases as general health, dental hygiene and posture. About 250 boys and girls were examined. The department of health gave many prizes to the boys and girls in the health contest and a trip to Chicago to the boy and girl who scored highest. Health contests were a part of the club program at the National and International Dairy Shows. - T. A. Erickson, State Club Leader, Department of Agriculture, University of Minnesota, St. Paul.

The 14 boys and girls enrolled in the "Let's Grow" contest or health project in this county are showing considerable interest in improving their health. They are keeping records of their height and weight, which are taken and reported every two weeks; they are checking their food on daily record cards; and they are following the rules of the health game as closely as possible. The mother of one health project club member reports that her family has changed its meal planning to conform to the health rules, in order that her boy may live up to the club requirements. She further states that the whole family is benefiting by his membership in the health club.

The records show that Bennie Grazin, of Birchdale, made the greatest gain in weight of any of the 14 boys and girls in the "Let's Grow" club. At the beginning of the contest Bennie was 30 per cent underweight for her height. Since May, when the contest started in this county, she has brought up her weight from 90 pounds to 99 pounds, or to 18 per cent underweight, and by September when the contest closes, Bennie hopes to be up to normal weight. She is following the rules of the health game as closely as possible and is reporting her weight and height regularly every two weeks.

Records for height and weight for boys and girls in the "Let's Grow" contest have been used in making growth charts or graphs, which have been sent to club members to show them what gain or loss in weight has been made. The children are sending in their reports regularly. - Clover M. Sabin, Home Demonstration Agent, International Falls, Koochiching County.

#### Mississippi

In the girl's health-contest project the following results are given:

Number of girls enrolled.....	3,169
Number who completed the health work.....	589
Number who had defects corrected.....	577
Number who used health score card.....	5,326
Number who corrected posture.....	4,089
Number who used cold preventive.....	3,331
Number who took special care of teeth.....	5,707
Number who took special care of skin and hair.....	4,028

In the beginning of the year each girl joined the health contest and received a copy of the health habits and score card so that she might prepare herself for the physical examination. In some counties they were examined in each community and the healthiest girl in the community entered



the county contest. The winners in the county contests entered the district contests and the four district winners went to Memphis to the State contest.

In the State contest Inez Hardin of Sunflower County, won first place. She scored 94.6 per cent, was 8 pounds underweight, and needed some dental work done. Between the State and national contests, Inez had these defects corrected, studied her diet, and won first place in the national contest with a score of 99.4 per cent. - Elaine Massey, Girls' State Club Leader, Mississippi Agricultural and Mechanical College, A. and M. College.

County, district, and State health contests for boys were conducted for the first time in 1924. Each boy who signed a health pledge became eligible to enter the county health contest. The winners in the county contests represented the counties in the district contests, the winners in the districts contests competed for State championship at the State contest, and the State champion represented the State at the national boys' and girls' health contest held at Chicago in December. Approximately 2,000 boys took part in the county health contests held in 31 counties of the State the past year. Twenty-eight of these counties were represented at the district contests held at the agricultural and mechanical college in August. Much credit is due the State and county health departments for the successful beginning made in this important work. Special mention is due the executive secretary of the State board of health, the physician in charge of the department of school hygiene, the county health officers, and the local physicians, as all have shown unusual interest and have cooperated with us in every possible way in carrying on this project.

After witnessing the examination of some 300 boys entering the contests I was profoundly impressed with the need for greater emphasis being placed on this phase of our work. Of the 300 or more boys whose examinations the writer witnessed and assisted in, there was not one without some defect, ranging in seriousness from slight underweight to active tuberculosis. Diseased tonsils and underweight were, perhaps, the most common defects found, and then came bad teeth, impaired vision, curvature of the spinal column, stooped posture, and so forth. The physical defects of these boys, as revealed by the examination, were as much of a shock to the boys, it seemed, as to those conducting the examination. As the boys left the room we overheard them remarking to each other, "I bet they won't find that many defects in me next year; I'm going to do what Dr. Hayes told me to do, and try to enter again next year." - J. E. Tanner, Boys' State Club Leader, Mississippi Agricultural and Mechanical College, A. and M. College.

### Missouri

The food-selection project was started in the Peerless community in Newton County, as follows: The nutrition specialist met with the community group at which time two project leaders were chosen; then the project leaders met three times with the specialist for training and took the information back to their community. Due to the illness of the specialist there was quite a long interval between two of these classes, but that did not interfere with the interest of the women.



For the final meeting the specialist met with the community group again. At this meeting the leaders reported on the splendid results obtained. The following table shows the improvement made in food and health habits:

	<u>Children</u>	<u>Adults</u>	<u>Remarks</u>
Number drinking more milk.....	13.....	16	
Number eating more vegetables.....	12.....	7	People in this section have an abundance of fruits and vegetables and most of them eat enough.
Number eating more fruit.....	9.....	9	
Number eating more whole-grain cereals...	16.....	20	
Number drinking more water.....	20.....	21	
Number eating more greens.....	5.....	10	
Number increasing the amount of tomatoes or oranges eaten.....	16.....	19	
Number eating fewer sweets between meals.	3.....	6	
Number drinking less tea and coffee.....	5.....	11	
Number eating good breakfast.....	5.....	7	Refers to those who had not eaten a good breakfast prior to this work.
Number taking daily exercise.....		5	
Number taking daily rest.....	12.....	12	

- Marion E. Dunshee, Nutrition Specialist, College of Agriculture, University of Missouri, Columbus.

The farm bureau, in cooperation with the Missouri College of Agriculture and the county superintendent of schools, held child-feeding contests in five schools to interest the pupils, the teachers, and the parents, in better health for children. Miss Marion Dunshee, nutrition specialist, and Miss Margaret Huston, from the college of agriculture, explained the contest in each school in January.

The health contests closed on April 11, with a health-day program at Weston. Eighty-five children, representing five school districts, met at that time to present their progress in gaining better health and to receive the physical examinations. The results of these tests clearly showed that many Platte County boys and girls are not receiving the proper kind of food and are not practicing those fundamental principles which tend to strong, sturdy development. More than 35 per cent of the children were found to be underweight.

All the children were given health score cards on which to score their daily habits, and special instructions were given to the underweight children in an effort to bring them to normal before the close of the contest. The underweights were instructed to drink more milk, to sleep with the windows open, to eat sweets only after meals, to eat less fried food, to eat one whole grain daily, and to go to bed at 8:30 o'clock.

More than 125 persons attended the health-day exercises. The Valley Forest school won first honors. This school made the greatest improvement in health, increasing the weight of all underweight children 16 per cent. In this school only one child, who was underweight at the beginning of the contest, failed to gain. All of these schools entered the contests with a determination to win and each one presented a program and health record of which the patrons were deservingly proud.



Five other school districts were represented at the closing exercises, all of which expressed a desire to take up the work. The county superintendent of schools has cooperated in this work and is intensely interested in the progress made by these children.

The final ranking of these schools is as follows: Valley Forest, 94 per cent; Fairview, 85 per cent; Hutson, 80 per cent; and Burress, 74 per cent.

Last year 8 schools, involving 125 children, carried on the hot-lunch work, and 5 of these schools continued the work in connection with the child-feeding contest. - J. M. Huston, County Agent, Platte City, Platte County.

### Nebraska

A health contest was held during 1 day of the county fair. Eight doctors, 2 oculists, 2 ear, nose and throat specialists, 2 dentists, and 2 general physicians gave time to this project. The 2 general physicians worked all day, whereas the others each gave a half day. One general physician, Dr. Pheln, gave unusually fine support to the work. Before the contest the home demonstration agent explained the plan to Dr. Pheln, and he obtained the services of the other doctors.

Fifty-two club members received complete physical examinations, and others received partial examinations. Only club members were examined. The health score card prepared by the State committee was used. Notations were made concerning each youngster, and these with a circular on foods and health, were sent to the parents after the fair. The mothers were asked to accompany their children during the examinations.

Mrs. C. E. Scrivens, who is a farm bureau executive board member and a trained nurse, was in charge of the contest which was held in one end of the dance hall on the fair grounds. Small rooms for the examinations were made by hanging sheets over rough framework. Each doctor was supplied with a helper, and two trained nurses assisted the general physicians. The fair board gave \$5 as first prize, \$3 as second prize, \$2 as third prize, and \$1 as fourth prize, to the healthiest boys and the same amount to the healthiest girls.

The mothers seemed to appreciate this work and many of them have requested a repetition of the examination next year. It also served the purpose of giving the doctors, and other outsiders, a keener interest in 4-H club work. - Grace Henderson, Home Demonstration Agent, Scottsbluff, Scotts Bluff County.

### Nevada

The nutrition project has met with most cordial response over the county and has been conducted most successfully. Keep-growing demonstrations have been carried on in 5 communities with a total of 770 children. In each of these communities, in accordance with the Nevada plan, the keep-growing demonstration has been conducted with the whole school as a project group with the idea of keeping the normal children up to weight, as well as increasing the percentage of normal weight children. In order to make the help rendered as practical as possible and to bring the health program within the



grasp of every child and mother concerned, the suggestions are condensed into the following 4 simple rules:

- (1) A sensible breakfast every day, including cooked mush.
- (2) A quart of milk every day
- (3) Two vegetables every day
- (4) 10 hours sleep every night

Last fall while the district agent was in White Pine County the nutrition specialist with the help of the local leaders, made the initial examinations in the five communities. Each month the local leaders re-weighed the children and made reports to the district agent. The district agent sent out all necessary materials, assisted the local leaders in weighing the children in January, and made health talks in the schools and before groups of interested women. In the spring the nutrition specialist and the district agent made the final examinations, computed the statistics, and made reports to community groups. The following tabulations show the results of the year's work in the project for one community:

In the Overton keep-growing demonstration, which began in October, 1923, and closed in April, 1924, 119 children were examined and 118 completed the examination with the following results:

	<u>October 1923</u>	<u>April 1924</u>
Percentage normal.....	25.21	33.89
Percentage slightly underweight.....	34.45	28.81
Percentage seriously underweight.....	6.72	16.95
Percentage dangerously underweight.....	32.77	19.49
Percentage seriously overweight.....	.84	.84

Analysis of the figures for the five communities show that the high percentages of improvement are in the localities where the community interest is strong and not necessarily where it is relatively easy to procure the prescribed milk and vegetables. The urban community of Las Vegas, where these necessities of growth must be purchased at high prices, has made a little better improvement than the rural communities where adequate diet means only work on the part of the parents, because in Las Vegas the project has been whole-heartedly adopted by the parent-teachers' association and a community consciousness of the problem has been aroused. On the other hand, the least improvement has been made at Bunkerville, where in spite of the hard work on the part of the leader, the community has not entered heartily into the project and, therefore, the children in the demonstration have lacked the home cooperation necessary to success. The agent and the leader are working out some plans which it is hoped will bring about this desired home cooperation in Bunkerville the coming year. - Ellen LeNoir, Home Demonstration Agent, Las Vegas, White Pine County.

#### New York

During the week beginning March 3, all Fayetteville saw and heard the latest work on health foods. The Onondaga county home bureau, under the direction of Mrs. C. J. Bryan, vice-president, and Miss Benedict, assistant county agent, with the help of the local home bureau, conducted a special



nutrition demonstration. The school, the stores, the library, and the like cooperated heartily in the project.

The demonstration culminated with a largely attended meeting of the parent-teachers' association on Thursday evening. In this program it was the children and not the parents who gave the latest rules and advice on proper feeding and health. Children from the first and second grades opened this program with a health song. "Jack Sprat," "The Fruit Girl," "Sing a Song of Cereals," and the "Milk Girl" appeared as living posters.

Members of the 4th, 5th, and 6th grades presented the pageant, "The Kingdom of Child Health." The king, Frederick Smith, seeks a queen for his kingdom, but only one may be chosen who has made the greatest health gain in the past half year, who has mastered the health rules, and who has made prisoners the enemies of health. Boys and girls dressed to represent the rules of health are presented to the king by the page. These rules include, long sleep, fresh air, cleanliness, exercise, strong teeth, apples, water, green vegetables, carrots, whole cereal, and eggs. Children dressed to represent the enemies of health, dirt, disease, the movies, candy, pie, tea and coffee are then brought in chains. In the end Ruby Doyle is chosen as queen of the kingdom of health.

The Wooden Soldiers, made famous by La Chauve Souris of the Russian Art Theater of New York, appeared in a Red Cross drill. The soldiers represented public health nursing, home hygiene and care of the sick, first aid, junior Red Cross, life saving, and nutrition. In their march from the stage they stood together for the whole field of health.

The only grown-up to appear was Miss Lydia Chace, county agent for the home bureau, who spoke of the value and extent of the home bureau work in the State, in which there are 36 counties having trained paid workers, and a membership of 30,000. Miss Chace told of the intimate relation between food and health. She said a well-balanced daily diet should include 2 fruits, 2 vegetables, 1 meat serving, 1 pint of milk (for children 1 quart), whole cereals, not over 2 cups of tea or coffee (none for children), plenty of water, no sweets between meals, and always a good breakfast.

Following the meeting "nutrition" refreshments were served, and the exhibits were enjoyed. The domestic science department had prepared attractive exhibits of economical breakfasts, dinners, and suppers for adults and children, and a display of the amount of fruits and vegetables needed by one person for one week in winter.

The store windows also told the story of correct feeding. Hullar's showed the milk bottle and all the good fairies it houses. Lewis' garage had an auto driving at full speed along the milky-way to healthland. Coon's window showed little people enjoying the school lunch of milk and graham crackers. Costello's had the mysterious vitamins. Two exhibits were shown at Eaton's furniture store. Milady's dressing table displayed the cosmetics which if applied from within would keep that schoolgirl complexion. Three dogs, the big, the middle-sized, and the very small one showed what one quart, one cup, or no milk a day have done. - Irene Dalziel, Home Demonstration Agent, Syracuse, Onondago County.



## North Carolina

The most outstanding work in Northampton County during the past year was the nutrition campaign which included work in nutrition, food preparation, food preservation, home gardens, home dairy, and home health and sanitation.

Last fall soon after the schools opened the county health officer and the home demonstration agent visited all the white schools in the county. On this visit the health officer examined the children and found many with diseased tonsils, adenoids, defective vision, and decayed teeth. The home demonstration agent weighed and measured 2,098 children and found 1,427 to be from 1 to 30 pounds underweight, and 671 to be overweight for their height. Blue ribbons were given the children whose weights were normal. During the remainder of the school term the teachers, the parents, and the home demonstration agent worked together to help the underweight children to gain.

The women studied nutrition and food preparation; they learned new ways of preparing food, and ways of making foods more attractive, especially to children. The women found that if the children were to have vegetables through the winter months it would be necessary to have winter gardens. As many families could not afford to buy the much needed fruits through the winter months, they canned fruits and vegetables to use in place of the fresh ones. As the children were especially requested to drink milk, and many children do not like it, the women found ways of disguising it. The children were also encouraged to eat more butter. Balanced meals were studied from all angles, after which the women tried to serve better balanced meals to their families.

When I attended a woman's club the first question asked was, "Are the underweight children in our school gaining?" Then some woman would tell us that her children were keeping all the rules I had given them and that they were gaining. These health rules are as follows:

- (1) Eat 3 hearty meals per day, with 2 lunches, 1 in midmorning and the other in midafternoon. No sweets between meals.
- (2) Rest 15 minutes every day.
- (3) Drink at least 1 pint of milk per day and leave off tea and coffee.

The teachers, the parents, and I, working together, tried to find out what caused the children to be underweight. The following are the chief causes which we found:

- (1) Physical defects, as diseased tonsils, adenoids, and the like.
- (2) Faulty food habits.
  - (a) Eating between meals and at any hour of the day.
  - (b) Drinking coffee to the exclusion of milk.
- (3) Not eating enough.
- (4) Insufficient rest.

Through stories, games, posters, and hygiene lessons the teachers and home demonstration agent taught the children what foods they should eat in order to gain, and encouraged the establishment of better and more regular health habits. We conducted contests to get the children to stop drinking coffee and to drink milk. Parents were informed of what the children



were asked to do in order to gain.

Throughout the year the children were weighed and the weights were checked from time to time to see if the children were gaining. When the campaign closed we found nearly all the children had gained some, many who were underweight weighed as much as they should for their height, and 985 of the children had made marked gains.

As a result of this campaign more fruits, more vegetables, and more milk are being used in the diet and the health of the children, in general, has been improved.

The following health program for the schools has been worked out by the home demonstration agent and the rural school supervisor for this term:

(1) Each school will please see that the children engage in wholesome play under the direct supervision of the teachers at all recesses.

(2) Each school is asked to conduct a milk campaign, trying to induce each child to drink at least 1 pint of milk per day.

(3) Each school is asked to serve a hot dish to all children bringing lunches at least three times per week.

(4) Each school is asked to weigh the children every month and keep records of the same.

(5) Each school is asked to give not less than 15 or more than 20 minutes to physical drills during school hours each day.

(6) Each teacher is requested to have regular periods for giving health instruction.

At the county commencement health certificates will be given to every child who has, for 95 per cent of the school year, kept the regulations specified under rules 2, 3, and 4; has had 15 minutes of physical drills each day during school hours; has had at least 30 minutes of play each day supervised by the teacher; has come to school clean (this included face, hands, hair, teeth, and clothes), and has had 1 hour of definite classroom instruction in health per week. - Mattie Lee Cooley, Home Demonstration Agent, Jackson, Northampton County.

### Rhode Island

The growth work has been established as a supplement to other projects, and not as a separate project. The object of this work is to improve those whose health and weight are not normal, and to help those in perfect health to maintain it. The weight curves keep a constant check on the growth, and the food and health scores check up on the points that influence health. Noticeable results have been obtained with the food score cards which have given an incentive for better food habits where the methods used by the district nurses have failed.

A typical example of the results of following the food and health habits is shown in the record of Saunderstown Gitchie Gumie Club which shows that in the past 3 months 6 members who were more than 7 per cent underweight, have gained 8, 7,  $6\frac{1}{4}$ , and 3 pounds, respectively. The leader reports that no one is more than 4 pounds underweight.

The first club in the State to report its members 100 per cent normal weight was the Hallville club of Exeter. Although slight variations were found from the average normal, they were all within the 7 per cent underweight or 15 per cent overweight allowance. On checking the food habits it was found



that two members had scores of 75 per cent, one an average of 80 per cent, two an average of 85 per cent, one an average of 90 per cent, and one an average of 95 per cent. These high scores explain the excellent scores of the members. - L. F. Kinney, State Club Leader, Rhode Island State College, Kingston.

### South Carolina

Milk-drinking contests were conducted, as follows:

At the Greenwood County girls' short course in June the State home economics specialist encouraged milk drinking by a contest. There were 11 girls at her table and at the first meal only 4 drank milk. At the second meal 1 more girl was persuaded to drink 2 tablespoonfuls, and at the following meals she drank milk regularly. Before the close of the short course all the girls at the specialist's table were drinking milk. When the contest was opened to all girls at the short course, only 2 of the 84 refused to drink milk.

In July, August, and September, at the regular monthly meetings, these girls were eager to tell that they are keeping up the milk drinking. After returning home from the short course one girl persuaded her whole family to begin drinking milk.

In Horry County the milk-drinking campaign was carried on in 11 of the girls' clubs and 2 adult clubs. In the junior clubs I offered pins to all girls who did not drink coffee or tea and did drink milk for 6 months. I have to give 54 pins. One girl, who formerly drank 9 cups of black coffee, says she can sleep at night now. Her complexion was green and her eyes were yellow, but now her cheeks are rosy and she has gained her normal weight. She has earned her pin.

In Lee County a milk-drinking campaign was conducted by the home agent and the county nurse in all the schools. Through this project, it was found that 80 per cent of the children were drinking some milk, but not enough. The other 20 per cent did not drink milk, either because they could not get it or did not like it. It was also found that only 7 per cent of the children took milk to school. After the project had been taken into the schools it was found that 90 per cent were carrying milk to school. - Minnie Floyd, Nutrition Specialist, Clemson Agricultural College of South Carolina, Clemson College.

### Texas

The work reported in the following paragraphs was conducted by the county home demonstration agent of Frio County in cooperation with the Red Cross nutrition specialist and the local school teachers.

According to the reports submitted by 830 children following a health and diet campaign, no children in Frio County are drinking tea or coffee.

Five hundred and fifty-eight grade-school children were weighed and measured by the Red Cross nutrition worker and the home demonstration agent, and 36 per cent were found to be more than 7 per cent underweight, while 24 per cent were 10 per cent or more underweight.



This situation is surely not a reflection on the county in the production of food nor the excellence of the food prepared by the mothers. Frio County is becoming famous for its truck crops and an increasing amount of fruit; yet, in most cases, these were the foods found wanting in the children's diet. It stands as a vivid indictment of the common practice of letting children have whatever they want to eat and eat whenever they want to. However, these children have demonstrated, themselves, that they will choose food wisely after having been thoroughly convinced of the value and necessity of a balanced diet.

The weighing and measuring was followed by lectures, classes, and consultations for the mothers and children. Eight hundred and thirty grade-school children were given health score sheets to be filled out every day and submitted to the teachers each week. These score cards contained the following suggestions: Drink plenty of water, eat fruits and vegetables, keep clean, and get plenty of sleep and fresh air. These cards were faithfully kept for six consecutive weeks.

The health score sheets turned in previous to the educational campaign, indicated that the diet of 50 per cent of the children was deficient in fruits and vegetables; that 25 per cent were using tea and coffee; and 50 per cent were not drinking enough milk.

There were nearly 5,000 health habit score sheets submitted by the 800 children in 6 weeks. This is practically 100 per cent. This high percentage was facilitated by the earnest cooperation of all school teachers.

The final summarization of the health score cards brought out the fact that 90 per cent of the children who did not drink enough milk, had increased their milk and dairy products consumption materially. The reports by the children, vouched for by the mothers, showed that none of the children wanted to drink tea or coffee after they had learned of its harmful effects.

Eighty-five per cent of the children whose diet was deficient in fruits and vegetables increased their consumption of these foods. Of the 36 per cent who were underweight at the beginning, 15 per cent had made appreciable gains even at the end of 6 weeks, when the reports ceased coming in. Special diets were prescribed for those who were 20 per cent overweight.

During this campaign, in order to give the children an opportunity to live up to some of the health rules without too much effort, three hot lunches were established. - Lena Wollschlaeger, Home Demonstration Agent, Pearsall, Frio County.

#### Washington

The most effective way of conducting the project for feeding the school child is the extensive nutrition plan. The gray-wall-room records are used in each room with stars and circles. The "Perfect Day Clock" is used in each room and "Climb to Health" in the first five grades. The red, white, or blue cards with health essentials and the daily program are tagged to each report card at least twice during the year. A letter of explanation with instructions is sent to each home. The work is organized by the nutrition project leaders, assisted by the extension agent or specialist, in a special training group, at a teacher's institute, or individually. In some counties the parent-



teachers' association cooperates with the extension service and makes arrangements for scales, hot lunches, milk-feeding lunches, bed-time clubs, and imparts instructions and nutrition programs to parents.

The subject matter is usually taught in the schoolroom by the teacher who uses stories, songs, posters, and bulletins furnished by the extension service. The teacher is trained by the extension agent or specialist.

The community leader schedules the meeting for parents to adopt score cards, guide to meal planning, food-preservation budget, and corrective diets. This meeting is held as a training school for home demonstrations. The teacher also asks the children to use the circulars and cards at home. The children are given a certificate of health accomplishment when they reach the average height-weight relationship and hold the average weight within  $\frac{1}{2}$  pound for one month.

The preschool work is organized by conducting nutrition conferences in the communities electing this project.

The county extension agent or specialist holds a training school to give instructions to the chairman and assistants for the conference which is to be held in a central place. The specialist arranges for the pediatrician and other specialists to conduct the clinic assisted by nurses. The nutrition specialist has a special conference room and gives out the feeding schedule and confers with each mother on her problems. When the child is under average or the problem is a nutritional one, the mother is given a sheet for a monthly report, and each mother is invited to attend the young mothers' study group with the round-table leader, home demonstration agent, and nurse. A series of lectures on the various phases of child care and child welfare is also arranged by the leader. The mothers are asked to report progress once a month. - M. E. Sutherland, Foods and Nutrition Specialist, State College of Washington, Pullman.

The following article shows how one teacher decreased malnutrition in her school:

"On January 11, our county agricultural agent weighed and measured the children enrolled in the Brookfield school and gave a talk on nutrition to the parents who were present.

As a result of this visit, we found that 70 per cent of the school children were underweight and two of the girls were 20 and 24 pounds, respectively, below normal weight. We became very anxious about this condition, and, as all of the children go home to their noon lunch, we decided to try a midforenoon and a midafternoon luncheon at school. Each pupil brings a pint of milk and a sandwich or crackers from home each day and this is served to them about 10:30 a. m. and 3:20 p. m. These lunches are followed by a short rest period and then recess.

In addition to this we have checked up on food rations for each meal per day for one week. In doing this we kept in mind the food value of what we ate, the foods which should be eaten sparingly and those which may be eaten in larger quantities, and we studied the reasons for balancing our daily rations. These studies were based on bulletins and other literature which we received from the State College of Washington, from our county agent, and from other cooperating agencies.



We also checked up on the number of hours of sleep, the amount and kind of exercise, and the personal care of our bodies which included the suitability of clothing in regard to weather conditions, bathing, and care of the teeth. This work was done through the aid of the health inspectors who were selected weekly from among the pupils.

Most of the parents of the underweight children are very much interested in this work and are giving their hearty support. The result is that all families have increased their milk supply from 1 to 3 quarts more, according to the number of children, so that their youngsters can have milk with their meals at home as well as at school.

At each weighing, which is about every 4 weeks, the children watch the chart very closely and are pleased when a blue star replaces a red one, or a gold star replaces a blue one. The red star means that the child is 7 per cent or more below normal, the blue star means that the child is less than 7 per cent below normal, and the gold star means that the child is normal.

Since the school lunches were started the children have improved in their school work and are less languid and pallid. In January there were 30 pupils enrolled, of which 33.3 per cent were less than 7 per cent underweight, 36.6 per cent were 7 per cent or more underweight, and 30 per cent were normal or above. In March, with an enrollment of 29 pupils there were 25.9 per cent less than 7 per cent underweight, 11.1 per cent were 7 per cent or more underweight, and 63 per cent were normal or above. In January, there were 11 pupils with red stars, 10 with blue stars, and 9 with gold stars; in February, there were 5 pupils with red stars, 10 with blue stars, and 13 with gold stars; in March, there were only 3 pupils with red stars, 7 with blue stars, and 19 with gold stars." - Fred S. Martin, County Agent, Cathlamet, Wahkiakum County.

### Summary

Extension work aims to help people to help themselves, under the precise conditions in which they find themselves. The excerpts in this brief show clearly the success with which extension workers have "cut their patterns to fit their cloth." We are struck with the variety of ways in which the same project has been adopted to the needs of different communities.

Through it all, however, we see the wide use of the food-habits score card as a standard of food selection and as a means of stimulating improvement in food habits and promoting a better food supply and the value of contests in spurring individuals and communities to their best efforts.

Outstanding, too, is the increasing tendency of public officials to pull together rather than to pull apart, and we are proud to see extension agents living up to their well-earned reputation for cooperation, by putting themselves in a frame of mind where other people can work with them.



The first part of the paper is devoted to a general discussion of the problem of the origin of life. It is shown that the problem is one of the most important and most difficult in the history of science. The author then proceeds to a detailed examination of the various theories which have been advanced to explain the origin of life. He shows that the most plausible of these theories is that which attributes the origin of life to the action of natural forces. This theory is supported by a number of facts which are presented in a clear and convincing manner. The author then discusses the question of the evolution of life, and shows that the evidence in favor of this theory is overwhelming. He concludes by pointing out that the study of the origin of life is a subject of great interest and importance, and that it is one which should be the subject of continued research.

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